

SAFETY ALERT

The Army recently lost two soldiers as a result of carbon monoxide poisoning. While on a field training exercise, two soldiers returned to their Soldier Crew Tent and started a commercial off-the-shelf (COTS) heater to warm up. The soldiers then closed the tent while the heater was on. Because the tent was essentially air tight, a lethal environment was created not only by the carbon monoxide from the heater but also from oxygen depletion from combustion and the soldiers' own breathing.

A factor in this accident was the use of an unvented commercial off-the-shelf heater. Warnings specified in ground precautionary messages indicate that the use of unflued or unvented heaters is inherently dangerous because they vent exhaust containing carbon monoxide into living spaces. Similar warnings as well as risk mitigation steps to include following manufacturers instructions, leaving tent doors and roof flaps open to allow air circulation, and using carbon monoxide detectors appear in safety of use messages as well as on the heater itself. Despite these warnings, the chain of command failed to inform or train subordinates of the dangers involved when using unvented heaters.

The Soldier Crew Tent also poses a hazard in that its fabric does not breathe. As noted in the operator's manual, all windows and flaps must be open to provide adequate ventilation. If windows and flaps are closed, it is possible to use all oxygen contained in the tent, especially during sleeping hours, resulting in death. The tent in combination with an unvented heater creates a high-risk hazard of possible suffocation and carbon monoxide poisoning. These dangers must be carefully risk managed with control measures that ensure the safe use of the tent during sleeping periods.

Another contributing factor in this accident was the implied approval by the chain of command of unvented propane heater use. Soldiers continually observed their use in the field so they assumed it was a normal procedure. Both the chain of command and the users became complacent in its use and these actions subsequently led to the accident. Supervisors at all levels must use risk management to identify potential hazards and establish controls to ensure the safety of subordinates. Leaders **must** enforce standards and continually be aware of possible hazards. In this case, the chain of command tacitly allowed the risk to exist and failed to follow their established procedures. Enforce the standards – don't let this silent killer get to you or your subordinates.

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